" حيث تصبح الرؤية واقعاً"
"When Vision Becomes Reality"

" عراقة وجودة"
**Tradition and Quality**

| Detailed Course Description - Course Plan Development and Updating Procedures/ Department of Software Engineering | QF01/0408-3.0E |
|---|---|

| Faculty | Science and IT | Department | Software Engineering |
|---|---|---|---|
| **Course number** | 0114357 | Course title | Software Economics |
| Number of credit hours | 3 | Pre-requisite/co-requisite | 0114252 |

**Brief course description**

This course will cover the following topics

Introduction to software engineering , Life Cycle Economics , Risk and Uncertainty , Economic Analysis Methods and Practical Considerations

| | Course goals and learning outcomes |
|---|---|
| **Goal 1** | Understand and be able to apply the key software engineering economic fundamentals to real-world software economic issues. |
| Learning outcomes | 1.1     Do a feasibility study to a software system. |
| **Goal 2** | Illustrate through example the key software life cycle economics, including product and process life cycles; portfolios; proposals; investment decisions; pricing and costing, and earned value management (EVM). |
| Learning outcomes | 2.1     Prepare proposals, portfolios, and take an investment decisions. |
| **Goal 3** | Apply the concepts of risk and uncertainty to real world software development projects, including goals; estimates; prioritization and decision making. |
| Learning outcomes | 3.1     Prepare a risk management plan. |
| **Goal 4** | Perform best-practice economic analysis methods. |
| Learning outcomes | 4.1  Choose the best economic method for a software project |
| **Textbook** | **1. Modern Cost Management**, Ralf Meyer and Karl Popp <br><br> Publisher: Books On Demand (December 6, 2011) <br><br> ISBN-10: 3844804056 <br><br> ISBN-13: 978-3844804058 <br><br> **2.  Software Engineering Economics** <br><br> 1st Edition <br><br> by Barry W. Boehm <br><br> Publisher: Prentice Hall; 1 edition (November 1, 1981) <br><br> ISBN-10: 0138221227 <br><br> ISBN-13: 978-0138221225 |
| **Supplementary references** | 1.Internet Marketing: Strategy, Implementation and Practice, 4/E Dave Chaffey Fiona Ellis-Chadwick, University of Derby Kevin Johnston, Derbyshire Business |

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|---|
| School, University of Derby Richard Mayer, University of Derby |
| ISBN-10: 0273717405 • ISBN-13: 9780273717409 |
| ©2009 • Financial Times Press • Paper, 736 pp |
| Published 08 Dec 2008 |
| |
| 2.E-Commerce Essentials Kenneth Laudon and Carol Traver |
| ISBN-10: 0133544982 • ISBN-13: 9780133544985 |
| ©2014 • Prentice Hall • Paper, 504 pp |
| Published 18 Oct 2013 • |
| |
| 3.E-commerce 2013 (9th Edition) by Kenneth Laudon and Carol Guercio Traver |
| |
| 4.E-Business and E-Commerce Management: Strategy, Implementation and Practice (5th Edition) by Dave Chaffey (Oct 24, 2011) |

| Course timeline | | | | |
|---|---|---|---|---|
| **Week** | **Number of hours** | **Course topics** | **Pages (textbook)** | **Notes** |
| **01** | 1<br>1<br>1 | 1- Software Engineering Economics Fundamentals: Finance, Accounting, Controlling, Cash Flow | | |
| **02** | 1<br>1<br>1 | Decision-Making Process, Valuation, Inflation, Depreciation | | |
| **03** | 1<br>1<br>1 | Taxation, Time-Value of Money, Efficiency, Effectiveness | | |
| **04** | 1<br>1<br>1 | 2- Life Cycle Economics: Product, Project, Program, Portfolio | | |
| **05** | 1<br>1<br>1 | Product Life Cycle, Project Life Cycle, Proposals, Investment Decisions | | |
| **06** | 1<br>1<br>1 | Planning Horizon, Price and Pricing, Cost and Costing, Performance Measurement, Earned Value Management, Termination Decisions | | |
| **07** | 1<br>1<br>1 | Planning Horizon, Price and Pricing, Cost and Costing, Performance Measurement, Earned Value Management, Termination Decisions | | |
| **08** | 1<br>1<br>1 | Risk and Uncertainty: Goals, Estimates, and Plans | | |

جامعة الزيتونة الأردنية

**Al–Zaytoonah University of Jordan**

كلية العلوم وتكنولوجيا المعلومات

**Faculty Of Science & IT**

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| | | | | |
|---|---|---|---|---|
| | | Estimation Techniques <br> Addressing Uncertainty | | |
| **09** | 1 <br> 1 <br> 1 | Prioritization, Decisions under Risk, Decisions under Uncertainty | | |
| **10** | 1 <br> 1 <br> 1 | Economic Analysis Methods <br> For-Profit Decision Analysis <br> Minimum Acceptable Rate of Return <br> Return on Investment <br> Return on Capital Employed | | |
| **11** | 1 <br> 1 <br> 1 | Cost-Benefit Analysis <br> Cost-Effectiveness Analysis <br> Break-Even Analysis | | |
| **12** | 1 <br> 1 <br> 1 | Business Case <br> Multiple Attribute Evaluation <br> Optimization Analysis | | |
| **13** | 1 <br> 1 <br> 1 | 3- Practical Considerations <br> The "Good Enough" Principle <br> Friction-Free Economy <br> Ecosystems <br> Offshoring and Outsourcing | | |
| **14** | 1 <br> 1 <br> 1 | 4- Case Study 1 | | |
| **14** | 1 <br> 1 <br> 1 | 5- Case Study 2 | | |
| **15** | 1 <br> 1 <br> 1 | 7-Review and Final Exams | | |
| **16** | 1 <br> 1 <br> 1 | Final Exam | | |

| **Theoretical course evaluation methods and weight** | Participation = 10% <br> First exam 20% <br> Second exam 20% | **Practical (clinical) course evaluation methods** | Semester students' work = 50% <br> (Reports, research, |
|---|---|---|---|

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| | Final exam 50% | | quizzes, etc.) Final exam = 50% |
|---|---|---|---|

| Approved by head of department | | Date of approval | |
|---|---|---|---|
| | | | |

Extra information (to be updated every semester by corresponding faculty member)

| Name of teacher | | Office Number | |
|---|---|---|---|
| Phone number (extension) | | Email | _____@zug.edu.jo |
| Office hours | | | |